Study Guide
for
Heavy Equipment Operator

Test Number: 2465

Human Resources
Talent Planning & Programs
Southern California Edison
An Edison International Company

REV082515

Introduction

The **2465 Heavy Equipment Operator Test** is a job knowledge test designed to cover the major knowledge areas necessary to perform the job. This Guide contains strategies to use for taking tests and a study outline, which includes knowledge categories and study references.

Test Session

It is important that you follow the directions of the Test Administrator exactly. If you have any questions about the testing session, be sure to ask the Test Administrator before the testing begins. During testing, you may **NOT** leave the room, talk, smoke, eat, or drink. Since some tests take several hours, you should consider these factors before the test begins.

All cellular/mobile phones, pagers or other electronic equipment will NOT be allowed in the testing area.

All questions on this test are multiple-choice or hot spot questions. Multiple choice questions have four possible answers. Hot spot questions have a picture, and you must click the correct spot on the picture to answer the question. All knowledge tests will be taken on the computer. For more information on this, please see the next section of this study guide on *Computer Based Testing*.

The test has a three hour time limit. A scientific calculator will be provided for you to use during the test. The calculator provided during the test session will be one of these models:

- Casio fx-250HC,
- Texas Instruments TI-30XA,
- Texas Instruments TI-36X

You will NOT be able to bring or use your own calculator during testing.

You will receive a Test Comment form so that you can make comments about test questions. Write any comments you have and turn it in with your test when you are done.

Study Guide Feedback

At the end of this Guide you have been provided with a Study Guide Feedback page. If a procedure or policy has changed, making any part of this Guide incorrect, your feedback would be appreciated so that corrections can be made.

Computer Based Testing

Taking an SCE knowledge test on the computer is simple. You do not need any computer experience or typing skills. You will only use the keyboard to enter your candidate ID and password. You'll answer all questions by pressing a single button on the mouse.

Log in Screen

You will be seated at a testing station. When you are seated, the computer will prompt you to enter the candidate ID and password you received in your invitation e-mail. You **MUST** have your candidate ID and password or you will be unable to take the test. Once you have confirmed your identity by entering this information, you will see a list of tests available to you.

Sample/Tutorial

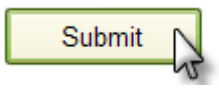
Before you start your actual test, a Sample/Tutorial Test is provided to help you become familiar with the computer and the mouse. From the list of exams that appear when you complete the log in, you will select Sample/Tutorial. You will have up to 10 minutes to take the Sample/Tutorial Test. The time you spend on this Sample Test does **NOT** count toward your examination time. Sample questions are included so that you may practice answering questions. In the Sample/Tutorial Test, you will get feedback on your answers. You will not receive feedback on your actual test.

Example

During the test, you may see several different types of items. Many of the questions will be multiple choice items. A few items will be pictures, where you'll have to click the spot on the picture that answers the question. Those picture questions are known as "Hot Spot" questions. More information on each type is below.

Overall Test Information

- When you begin the test, you can see the total time allowed for completion displayed at the top of the screen. You can scroll up to see that information at any time during the test.
- You can change your answers at any time during the test until the time runs out, or you click the "Submit" button. Once you click Submit, you can not change your answers.

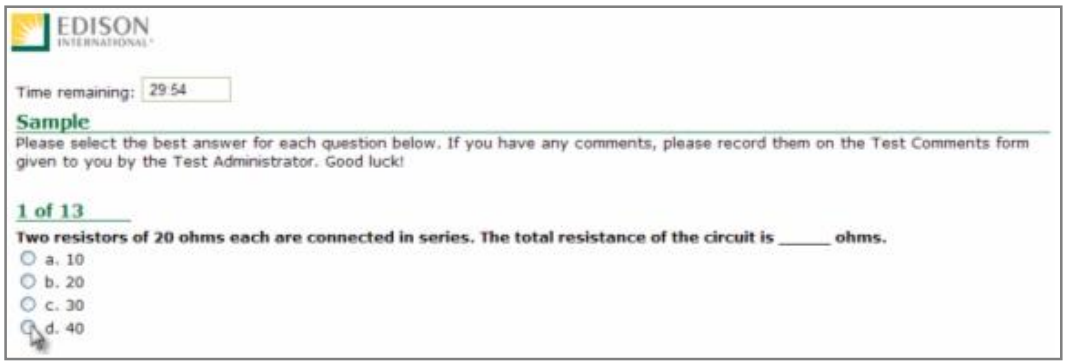


Multiple Choice Questions

To answer each multiple choice question, you should move the mouse pointer over the circle (radio button) next to the answer of your choice, and click the left mouse button.

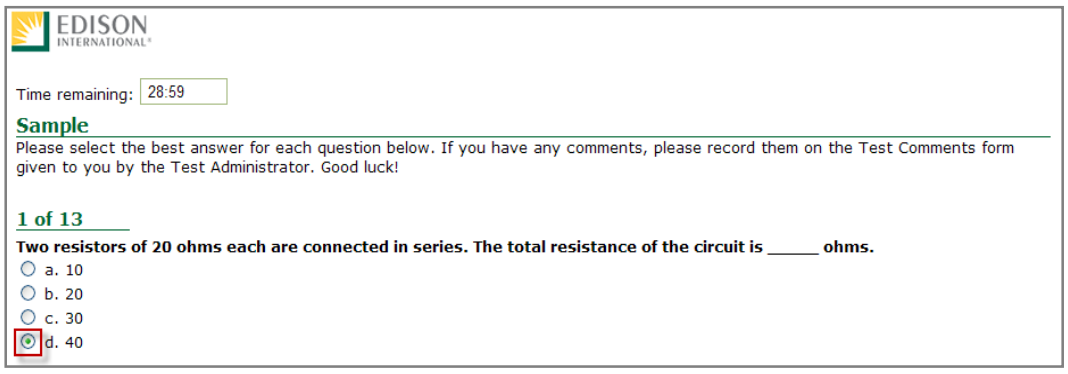
A sample is shown below:

1. In order to answer each question, first read the question and determine the response that best answers the question. Put the mouse pointer directly over the circle corresponding to that response.


EDISON
INTERNATIONAL
Time remaining: 29:54
Sample
Please select the best answer for each question below. If you have any comments, please record them on the Test Comments form given to you by the Test Administrator. Good luck!
1 of 13
Two resistors of 20 ohms each are connected in series. The total resistance of the circuit is _____ ohms.
a. 10
b. 20
c. 30
d. 40

2. While the pointer is over the circle corresponding to the best answer, click the left mouse button.

3. The answer you selected should now have a green dot in the circle. If you need to select an alternate answer, simply move the pointer over that circle, and click again.


EDISON
INTERNATIONAL
Time remaining: 28:59
Sample
Please select the best answer for each question below. If you have any comments, please record them on the Test Comments form given to you by the Test Administrator. Good luck!
1 of 13
Two resistors of 20 ohms each are connected in series. The total resistance of the circuit is _____ ohms.
a. 10
b. 20
c. 30
d. 40

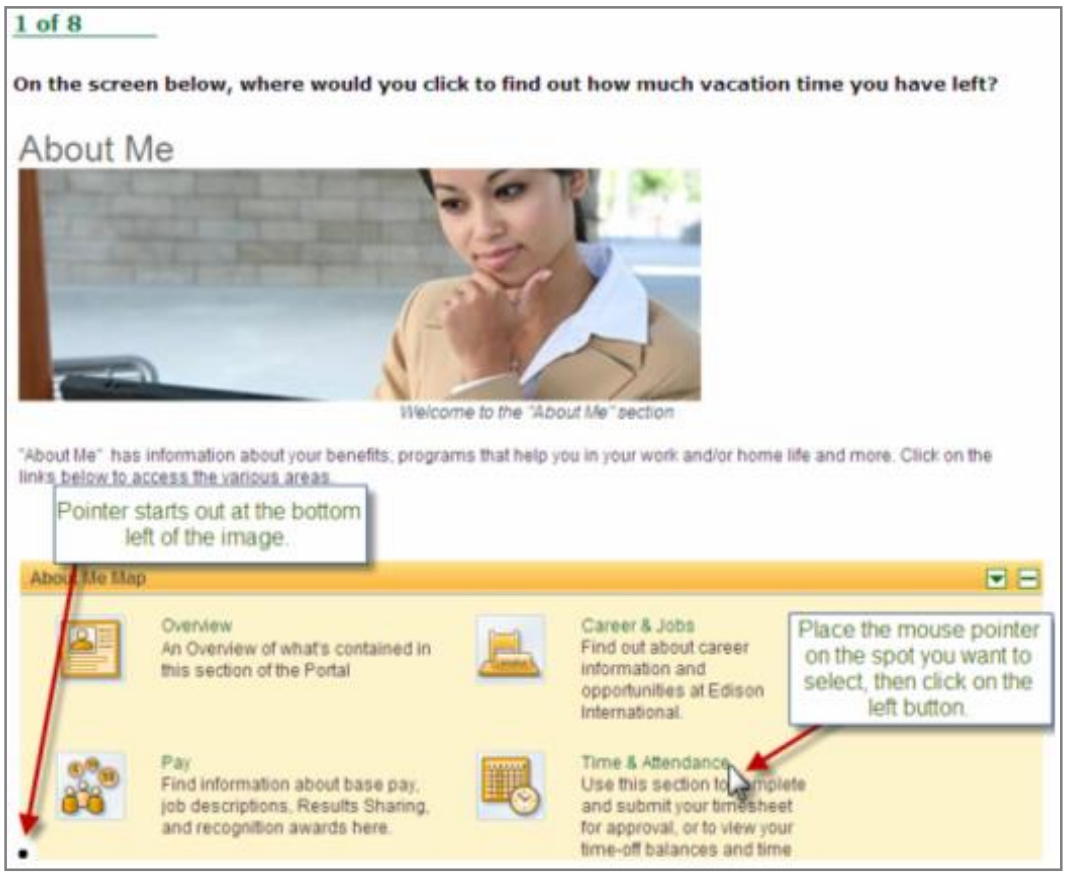
Hot Spot Questions

To answer each Hot Spot question, you should move the mouse pointer over the part of the image that best answers the question, and click the left mouse button. You will see a pointer appear in that spot. If you want to change your answer, simply move the mouse pointer to a new area on the picture and click again. The pointer will move to the new spot.

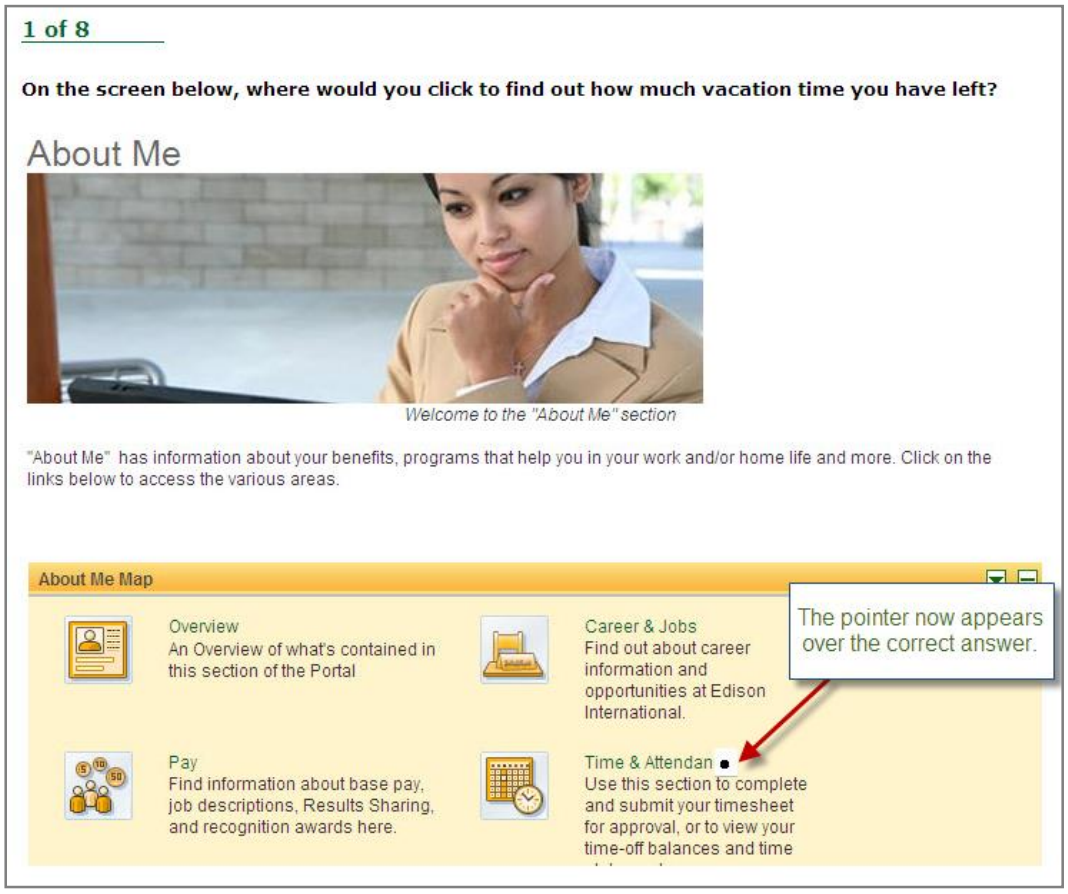
A sample is shown below:

1. In order to answer each question, first read the question and determine the place on the image that best answers the question. The pointer that will indicate your answer can always be seen in the bottom left of the image. It looks like this:

   Put the mouse pointer directly over the spot on the image you want to select, and click the left mouse button.


1 of 8
On the screen below, where would you click to find out how much vacation time you have left?
About Me
Welcome to the "About Me" section
"About Me" has information about your benefits, programs that help you in your work and/or home life and more. Click on the links below to access the various areas.
Pointer starts out at the bottom left of the image.
Overview
An Overview of what's contained in this section of the Portal
Career & Jobs
Find out about career information and opportunities at Edison International.
Place the mouse pointer on the spot you want to select, then click on the left button.
Pay
Find information about base pay, job descriptions, Results Sharing, and recognition awards here.
Time & Attendance
Use this section to complete and submit your timesheet for approval, or to view your time-off balances and time

2. The pointer will move from the bottom left of the image and appear over the spot you selected.


1 of 8
On the screen below, where would you click to find out how much vacation time you have left?
About Me
Welcome to the "About Me" section
"About Me" has information about your benefits, programs that help you in your work and/or home life and more. Click on the links below to access the various areas.
About Me Map
Overview
An Overview of what's contained in this section of the Portal
Career & Jobs
Find out about career information and opportunities at Edison International.
Pay
Find information about base pay, job descriptions, Results Sharing, and recognition awards here.
Time & Attendan
Use this section to complete and submit your timesheet for approval, or to view your time-off balances and time
The pointer now appears over the correct answer.

3. To change your answer, simply move the mouse pointer to the new spot, and click again. The pointer graphic will move to the new spot you've selected. In order for your answer to be considered be correct, the center of the pointer (•) must be over the correct spot on the graphic.

Test Taking Strategies

Introduction

The **2465 Heavy Equipment Operator Test** contains multiple-choice questions and may also contain hot spot questions. The purpose of this section is to help you to identify some special features of a multiple-choice test and to suggest techniques for you to use when taking one.

Your emotional and physical state during the test may determine whether you are prepared to do your best. The following list provides common sense techniques you can use before the test begins.

Technique	Remarks
Be confident	- If you feel confident about passing the test, you may lose some of your anxiety. - Think of the test as a way of demonstrating how much you know, the skills you can apply, the problems you can solve, and your good judgment capabilities.
Be punctual	- Arrive early enough to feel relaxed and comfortable before the test begins.
Concentrate	- Try to block out all distractions and concentrate only on the test. You will not only finish faster but you will reduce your chances of making careless mistakes. - If possible, select a seat away from others who might be distracting. - If lighting in the room is poor, sit under a light fixture. - If the test room becomes noisy or there are other distractions or irregularities, mention them to the Test Administrator immediately.
*Budget your time*s	- Pace yourself carefully to ensure that you will have enough time to complete all items and review your answers.
Read critically	- Read all directions and questions carefully. - Even though the first or second answer choice looks good, be sure to read all the choices before selecting your answer.
Make educated guesses	- Make an educated guess if you do not know the answer or if you are unsure of it.

Changing answers	-	If you need to change an answer, be sure to erase your previous answer completely. On the computer, be sure that the new answer is selected instead of the old one.
Return to difficult questions	-	If particular questions seem difficult to understand, make a note of them, continue with the test and return to them later.
Double-check math calculations	-	Use scratch paper to double check your mathematical calculations.
Review	-	If time permits, review your answers.
	-	Do the questions you skipped previously.
	-	Make sure each answer bubble is completely filled in. Erase any stray marks on your answer sheet. When testing on the computer, make sure each multiple choice question has a green dot next to the correct answer.

Remember the techniques described in this section are only suggestions. You should follow the test taking methods that work best for you.

Job Knowledge Categories and Study References

Below are the major job knowledge areas (topics) covered on the **2465 Heavy Equipment Operator Test** and the associated study references. Listed next to each knowledge category is the number of items on the exam that will measure that topic. You can use this information to guide your studying. Some exams also contain additional pretest items. Pretest items will appear just like all of the other items on your exam, but they will not affect your score. They are an essential part of ensuring the **2465 Heavy Equipment Operator Test** remains relevant to successful performance of the job.

There are a total of 55 items on the **2465 Heavy Equipment Operator Test** and the passing score is 69%.

A. Tools and Equipment (17 items)

Knowledge of proper use and care of hand tools and heavy equipment. This includes knowledge of operations, functional characteristics, and maintenance requirements of heavy equipment such as tractors, road graders, bulldozers, and backhoe. Understanding of operation, adjustment, and maintenance of auxiliary equipment and proper use of rigging tools.

References for Tools and Equipment:

- ✓ Moving the Earth: The Workbook of Excavation. Herbert L. Nichols. Publisher: McGraw Hill.
- ✓ On Case 850 Bulldozer Factory Service Manual. Ch. 2 Engine Accessories, Ch 5 Track and Track Frame, and Ch 9 Auxiliary Equipment. Publisher: Case.
- ✓ Hoisting and rigging: Safety manual. Etobicoke, Ontario. Publisher: Construction Safety Association of Ontario.

B. Standard Procedures (21 items)

Knowledge of standard procedures for road building, job planning, diesel engine operation, clearing lands and plumbing. This includes mechanical theory (i.e., gear ratios, force, leverage), survey readings, and basic mathematics (i.e., multiplication, volume, ratios, area, conversions).

References for Standard Procedures:

- ✓ Moving the Earth: The Workbook of Excavation. Herbert L. Nichols. Publisher: McGraw Hill.
- ✓ Plumbing Design and Installation. Ch. 7 Sanitary Drainage. Publisher: American Technical Publishers.
- ✓ Hoisting and rigging: Safety manual. Etobicoke, Ontario. Publisher: Construction Safety Association of Ontario.

C. Materials (5 items)

Knowledge of various materials used in construction of roads.

References for Materials:

- ✓ Moving the Earth: The Workbook of Excavation. Herbert L. Nichols. Publisher: McGraw Hill.
- ✓ Pocket ref. (3rd Edition). Thomas J. Glover. Publisher: Sequoia Publishing.

D. Safety (12 items)

Knowledge of safety practices and procedures including those for: working in a trench, working around energized equipment, using ladders, winch operations, driving commercial vehicles and operating heavy equipment. Understanding of basic rigging techniques used to safely lift a load or secure material.

References for Safety:

- ✓ Moving the Earth: The Workbook of Excavation. Herbert L. Nichols. Publisher: McGraw Hill
- ✓ California Commercial Driver Handbook
- ✓ OSHA Regulations – Standards (29-CFR). 1910.25(d)(2)(i)
- ✓ Hoisting and rigging: Safety manual. Etobicoke, Ontario. Publisher: Construction Safety Association of Ontario.

Study Guide Feedback

Please use this page to notify us of any changes in policies, procedures, or materials affecting this guide. Once completed, return to:

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1515 Walnut Grove Ave.
Rosemead, CA 91770

Test Name: 2465 Heavy Equipment Operator Test

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